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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,297	08/30/2001	Bradley Stephen Sonksen	ENTRDA.0020P	1902

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EXAMINER	
DAVIS, CYNTHIA L	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,297	SONKSEN ET AL.	
	Examiner	Art Unit	
	Cynthia L Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-35 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 August 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 26 is objected to because of the following informalities: in line 19, "forth" should be changed to "fourth". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-8, 10-12, 14-26, and 28-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa.

Regarding claim 1, providing a portion of a packet to a data selector; providing a control word to the switch; providing control instructions to the data selector, the control instructions containing data regarding operation of the data selector is disclosed in Ogawa, column 3, lines 44-54 (the input data control circuit receives the incoming packet and the control information, so as to process the packet according to its specific protocol). Outputting data from the data selector comprising a portion of the packet or a portion of the control word is disclosed in column 3, lines 56-57 (the packets are modified in accordance with the protocol of the packet).

Regarding claim 2, the data selector output comprises a modified packet is disclosed in column 3, lines 56-57 (the packets are modified in accordance with the protocol of the packet).

Regarding claim 3, providing a label to the data selector, and wherein outputting data from the data selector comprises a portion of the packet or a portion of the label is disclosed in column 3, lines 44-57 (the packet is modified to include routing information to transform it into whatever protocol is necessary; this may include inclusion of a label).

Regarding claim 4, the control word is stored in a control word bank is disclosed in column 3, lines 52-54 (the protocol type codes correspond to control words).

Regarding claim 6, the portion of a packet is stored in a register is disclosed in Ogawa, column 3, line 46.

Regarding claim 7, the data selector comprises a multiplexer is disclosed in figure 3 of Ogawa, element 25A.

Regarding claim 8, a method for dynamically modifying a packet using a pipeline processing system is disclosed in column 4, line 11 of Ogawa. Storing a portion of the packet in a register is disclosed in column 3, line 46. The register accessible by a multiplexer is disclosed in figure 3, element 25A. Storing supplemental data in a memory, the supplemental data accessible by the multiplexer, is disclosed in column 3, lines 52-54 (the protocol type codes are supplemental data). Clocking data from the portion of the packet and the supplemental data into the multiplexer is disclosed in column 3, line 60 (the sequence counter). Controlling the multiplexer with control instructions to selectively output a portion of the portion of the packet and/or a portion of the supplemental data to generate a dynamically modified packet is disclosed in column 3, lines 44-54 (the system outputs a packet that has been modified according to control instructions that are selected based on the protocol type of the packet).

Regarding claim 10, analyzing an output from a progress counter to determine multiplexer output is disclosed in column 4, lines 2-8 (the header end timer).

Regarding claim 11, the supplemental data comprises a control word and the memory comprises a control word bank is disclosed in column 3, lines 52-54 (the protocol type codes correspond to control words, as they determine the type of processing done to the packets).

Regarding claim 12, the supplemental data comprises label data is disclosed in column 3, lines 46-50 (data stored in the system includes routing data, which is equivalent to a label).

Regarding claim 14, the pipeline processing system includes two or more stages and further including generating control data at each stage to distribute control operations at two or more stages is disclosed in column 17, lines 45, of Ogawa (disclosing a 5-step pipeline).

Regarding claim 15, identifying a control word to guide processing of a packet, the control word being associated with a packet and containing tag data is disclosed in column 3 of Ogawa, lines 44-54 (the protocol type codes and other routing data used in the system are equivalent to tag data). Storing a portion of a packet in a memory; and selectively outputting, based on the control word, either of a portion of the packet or a portion of tag data to generate the packet with a tag attached is disclosed in column 3, lines 40-43 (the packets are processed and output with new tag data attached, in order to convert between protocols in the network).

Regarding claim 16, accessing an output of a byte counter to determine the location at which to insert tag data is disclosed in column 3, line 60 of Ogawa.

Regarding claim 17, accessing label data to obtain additional tag data is disclosed in column 3, lines 46-52 (disclosing various types of tag data associated with each packet).

Regarding claim 18, the memory comprises a register is disclosed in column 3, line 46.

Regarding claim 19, the method occurs in a pipeline processing system configured to pass an entire packet through the pipeline processing system and selectively add a tag to the packet is disclosed in column 4, line 11.

Regarding claim 20, replace portions of the packet with tag data as the packet passes through the pipeline processing system is disclosed in column 3, lines 18-19 (this system is designed to interface between networks of different protocols; packets from one would necessarily have to have routing information of the first protocol replaced with routing information from the second protocol).

Regarding claim 21, the control word includes control store instructions is disclosed in column 3, line 56 (processing requires instructions).

Regarding claim 22, a first memory configured to store a control word is disclosed in column 3, lines 52-54 (the protocol type code is equivalent to a control word). A second memory configured to store a portion of a packet is disclosed in column 3, lines 45-46 (the frame data is stored), a third memory configured to store data selector control instructions is disclosed in column 3, line 56 (the system has stored

processing instructions for each protocol), a data selector in communication with the first, second, and third memories and configured to output data from the first memory or data from the second memory based on the data selector control instruction from the third memory is disclosed in figure 3, element 25A (the multiplexer).

Regarding claim 23, the second memory comprises a register is disclosed in column 3, line 46.

Regarding claim 24, the data selector comprises a multiplexer is disclosed in figure 3, element 25A.

Regarding claim 25, a data counter having an output connected to the data selector and controlling when the data selector should output data from the first memory is disclosed in column 3, line 60 (the sequence counter).

Regarding claim 26, a fourth memory configured to store additional data for use in modifying or supplementing the contents of the packet when the control word does not contain the desired data is disclosed in column 3, lines 46-52 (disclosing various types of data associated with the packet being stored in a memory).

Regarding claim 28, a system for modifying a packet based on control instructions is disclosed in column 3, line 56 of Ogawa (processing a packet requires instructions). A pipeline processing stage is disclosed in column 4, line 11. One or more memory modules configured to store packet data and supplemental data is disclosed in column 3,line 46 (the register). A processing module configured to: add supplemental data to a packet or strip data from a packet, based on control instructions and a processing location in the packet is disclosed in column 3, lines 18-19 (the

system links different types of networks; the packets must have routing data according to a first protocol stripped and replaced with routing data according to a second protocol). A packet location tracking system configured to track the current processing location in the packet is disclosed in column 3, line 60. a memory bank configured to store control instructions is disclosed in column 3, lines 55 (the various processing methods would have instructions stored in a memory in the system).

Regarding claim 29, the processing module is further configured to modify data in a packet or decrement a byte of data in a packet is disclosed in column 3, lines 18-19 (the system links different types of networks; the packets must have routing data according to a first protocol modified in accordance with the routing data format according to a second protocol)

Regarding claim 30, an interface configured to interface the pipeline processing stage with the control system is disclosed in column 4, line 11 (there is a pipeline system that operates in the same system with the control system).

Regarding claim 31, add supplemental data, strip data, and replace data may occur at any location in a packet is disclosed in column 4, lines 15-21 (the system goes through the entire packet, and could potentially add, strip, or replace data anywhere in the packet).

Regarding claim 32, the packet location tracking system comprises a counter is disclosed in column 3, line 60 (sequence counter).

Regarding claim 33, an end of packet monitoring system configured to detect the end of a packet, the end of packet monitoring system configured to reset the packet

location tracking system is disclosed in column 4, line 21 (the frame counter initializing signal).

Regarding claim 34, further including a control instruction selecting systems configured to identify which of a plurality of control instructions are for use by the pipeline processing stage is disclosed in column 3, line 56 (the type of processing, and control instructions, is selected based on the protocol of the packet).

Regarding claim 35, the control instruction selecting systems comprises a packet counter configured to provide an output to the processing stage indicating a location in the memory bank at which the control instructions for the packet are located is disclosed in column 3, line 56 (the correct type of processing is selected, so the system must know the location of the instructions for the type of processing).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 5, 9, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Gindi.

Regarding claim 5, the control instructions comprise microcode is missing from Ogawa. However, Gindi discloses in column 10, line 36, a system using microcode instructions. It would have been obvious to one skilled in the art to use microcode

instructions to carry out the system of Ogawa. The motivation would be to use an old, well-known language to implement the instructions.

Regarding claim 9, the control instructions comprise microcode that is generated by a user of the pipeline processing system is missing from Ogawa. However, Gindi discloses in column 10, line 36, a system using microcode instructions. It would have been obvious to one skilled in the art to use microcode instructions to carry out the system of Ogawa. The motivation would be to use an old, well-known language to implement the instructions.

Regarding claim 27, the data selector control instructions comprise microcode is missing from Ogawa. However, Gindi discloses in column 10, line 36, a system using microcode instructions. It would have been obvious to one skilled in the art to use microcode instructions to carry out the system of Ogawa. The motivation would be to use an old, well-known language to implement the instructions.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa.

Regarding claim 13, the portion of the packet comprises four bytes is missing from Ogawa. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on the applicant (see page 11, line 15, of the instant specification, which states that the system "may" use a 4-byte register to store the packet portion). In re Mason, 87 F2d 370, 32 USPQ 242 (CCPA 1937).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
3/3/2005 CLD 3/3/05

ALPUS H. HSU
PRIMARY EXAMINER